# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/753,339 | 12/29/2000 | Lyndon Y. Ong | 61473/0269205 | 8404 |

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2616 | |

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | | Application No. | Applicant(s) |
|---|---|---|---|
| **Office Action Summary** | | 09/753,339 | ONG, LYNDON Y. |
| | | Examiner | Art Unit |
| | | AHMED ELALLAM | 2616 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>09 May 2006</u>.

2a)☐ This action is **FINAL.**    2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>*1 and 3-6*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1, 3-6*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some *  c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

This office communication is responsive to amendment filed on 5/09/2006. The

amendment has been entered.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1.      Claims 1, 4 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement.  The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Regarding claim 1, the specification as original filed doesn't describe the claimed

feature "controlling new traffic emitted into the connection to not exceed the lesser..".

The specification as originally filed refers to traffic emitted into the network and

not to a connection.

Regarding claim 4, claim 4 suffers from similar remarks as in claim 1 above, thus

it is subject to the same rejections.

Regarding claim 6, the specification as original filed doesn't describe the claimed

feature "controlling traffic from the sending node delivered onto the connection so that

the amount of unacknowledged traffic from the sending node doesn't exceed the

congestion window". In addition the phrase "the connection" lack antecedent basis.

Examiner indicated in the previous office action on page 4, second paragraph,

"*in accordance with the specification, it is the new traffic emitted into the connection*

*(congested connection) that is "lesser of a current amount of unacknowledged traffic*

*emitted by the sender into the network at a time of detection of the congestion condition,*

*and current receiver buffer size at that time" and not the desired fixed bandwidth*".

Emphasis added. Examiner notes that such suggestion was provided in accordance

with the claims as amended without considering the support of the limitation "*traffic*

*emitted into the connection*" by the original specification. Examiner erroneously

suggested such language and apologizes for not indicating that the limitation of "*traffic*

*emitted into the connection*" constituted new matter.


### Claim Rejections - 35 USC § 102

 (e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

2.      Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by

Ludwig, US 6,754,228.

Regarding claim 1, Ludwig discloses a prior art method of controlling congestion

in a communication network, the method comprising:

Controlling traffic emitted into a connection between a sender and a receiver in accordance with the minimum of congestion window size and an advertised window size, see column 6, lines 17-22, the advertised window corresponds to the input buffer capacity on the receiver side, see column 1, lines 59-62 and column 4, lines 31-59, (Examiner interpreted the congestion window as being the traffic that can be sent prior to receiving acknowledgment, and that correspond to the claimed unacknowledged traffic).

Ludwig further discloses that the advertised window is determined by the receiver, whereas the congestion window is determined by the sender, the congestion window is flow and is based on the sender's assessment of perceived network congestion control imposed by the sender, see column 4, lines 60-67.

Ludwig also discloses assessment of perceived network congestion control imposed by the sender by calculating a usable window (data that can be sent) as the difference between the total window size and the data that has been sent but not acknowledged, see column 3, lines 10-14. (Examiner interpreted this later feature of Ludwig to correspond to the claimed detecting a network congestion condition in response to an occupancy threshold of a transmit buffer of the sender).

Ludwig discloses that a window size is calculated in dependence of bandwidths, see column 6, lines 17-22 (the connection of Ludwig has a fixed bandwidth as evidenced by incorporation into the calculation of the window size, moreover connections have fixed bandwidth imposed by hardware design).

Regarding claim 4, Ludwig discloses assessment of perceived network

congestion control imposed by the sender by calculating a usable window (data that

can be sent) as the difference between the total window size and the data that has

been sent but not acknowledged, see column 3, lines 10-14. (Examiner interpreted this

later feature of Ludwig to correspond to the claimed detecting a potential congestion in

a connection between a source node and a destination node in the communication

network). Ludwig also discloses that a window size is calculated in dependence of

bandwidths, see column 6, lines 17-22 (the connection of Ludwig has a fixed

bandwidth as evidenced by incorporation into the calculation of the window size,

moreover connections have fixed bandwidth imposed by hardware design). (Claimed

connection having a desired bandwidth). Ludwig also discloses controlling traffic

emitted into a connection between a sender and a receiver in accordance with the

minimum of congestion window size and an advertised window size, see column 6,

lines 17-22, the advertised window corresponds to the input buffer capacity on the

receiver side, see column 1, lines 59-62 and column 4, lines 31-67, (Examiner

interpreted the congestion window as being the traffic that can be sent prior to

receiving acknowledgment, and that correspond to the claimed unacknowledged

traffic). (Claimed upon detection of the potential congestion condition, controlling new

traffic emitted into the connection to be no more than the lesser of a current

unacknowledged traffic load at the source node of the network at the time of detection

and a receive buffer size of the receiving node).

Regarding claim 6, Ludwig discloses assessment of perceived network

congestion control imposed by the sender by calculating a usable window (data that

can be sent) as the difference between the total window size and the data that has

been sent but not acknowledged, see column 3, lines 10-14. (Claimed detecting

whether a congestion condition is present in response to an occupancy threshold of a

transmit buffer of a sending node of the communication network), Ludwig also

discloses that a window size is calculated in dependence of bandwidths, see column 6,

lines 17-22, and controlling traffic emitted into a connection between a sender and a

receiver in accordance with the minimum of congestion window size and an advertised

window size, see column 6, lines 17-22, the advertised window corresponds to the

input buffer capacity on the receiver side, see column 1, lines 59-62 and column 4,

lines 31-67, (Claimed when a congestion condition is present, setting a congestion

window to a prescribed value, wherein the prescribed value is the lesser of a current

amount of unacknowledged traffic emitted by the sending node into the network at time

of detection of the congestion condition and a receiver buffer size at that time, and

controlling traffic from the sending node delivered into the network so that the amount

of unacknowledged traffic from the sending node doesn't exceed the congestion

window size).


## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.       Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig.

Regarding claims 3 and 5, Ludwig discloses having a flow of data from a sender to a receiver is controlled by automatically taking into account one or more bandwidth value associated with the connection. See column 9, lines 31-43. Ludwig also discloses that the value to be associated with a given link is the bandwidth of the physical connection corresponding to the link, and Ludwig disclosed that the physical bandwidth can either be the absolutely maximum bandwidth that a specific link can offer, in which case the value is constant for a given link, or the maximum bandwidth under the prevailing conditions, see Column 9, lines 66-67 and column 10, lines 1-23

Therefore Ludwig discloses substantially all the limitations of claims 3 and 5, except it doesn't disclose the network been a private network.

However it would have been obvious to a person of ordinary person of skill in the art at the time the invention is made to implement the congestion control mechanism of Ludwig to a private network such as an Intranet so that bandwidth optimization can be provided in a similar manner as in the communication network of Ludwig, for example taking advantage of minimizing congestion applied to a private network. (Ludwig column 9, lines 44-53).

### Response to Arguments

4.      Applicant's arguments with respect to claim 4 have been considered but are moot

in view of the new ground(s) of rejection.

**Election/Restrictions:**

Applicant's traversal of claims 8-13 in the reply filed on 5/09/2006 is

acknowledged.  The traversal is on the ground(s) that the method of detecting

congestion on a connection (claims 1, 3-6), include within their scope a method for

monitoring for indication of dropped packets on a connection.  This is not found

persuasive as indicated below.

Applicants submitted that the claims (8-13) are not drawn to two independent or

distinct inventions, and do not believe that there would be a serious burden on the

Examiner to examine the application as filed. Applicants urged the Examiner to

reconsider this issue.

Examiner respectfully disagrees with Applicants position. The claims 8-13 are

withdrawn from reconsideration in that claims 8-13 have limitations that were not

present in any original claims. For example claim 8 requires the monitoring of a

connection for dropped packet as an indication of a congestion condition, while original

claim 1 for example requires a sender buffer occupancy threshold as the indicator for

the congestion condition, moreover independent claim 8 also requires the controlling of

a rate of transmission of the dropped packets. It is clear that claim 8 has a completely

different scope than originally presented claims as evidenced by the absence of any

limitation in the claims as originally presented, thus contrary to Applicants assumption, the new claims (8-13) indeed have a serious burden on the Examiner, because the invention of claim 8 is clearly distinct from that of claim 1, and thus would require a burdensome search for the Examiner. Therefore, Examiner respectfully maintains that the restriction by the original representation is proper.

The requirement is still deemed proper and is therefore made FINAL.


### *Conclusion*

5.     The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.
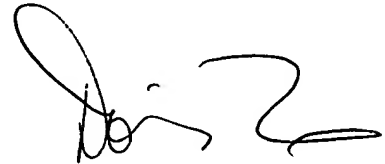
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, To Doris can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Examiner
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7/21/06

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